



The University of Wisconsin System

Vice President for Business and Finance 1752 Van Hise Hall 1220 Linden Drive Madison, Wisconsin 53706 (608) 262–1311 FAX (608) 262–3985

July 2, 1997

Senator Brian Burke Representative Scott Jensen Co-Chairs, Joint Committee on Finance

Mark D. Bugher, Secretary Department of Administration

Dear Senator Burke, Representative Jensen and Secretary Bugher:

This letter requests approval of the UW System's 1997-98 plan for student fee funded auxiliary reserve balances as currently required by section 36.46, Wisconsin Statutes:

"The Board may not accumulate any auxiliary reserve funds from student fees unless the fees and the reserve funds are approved by the secretary of administration and the joint committee on finance under this section. A request by the board for such approval shall ... include a plan specifying the amount of reserve funds the board wishes to accumulate and the purposes to which the reserve funds would be applied, if approved."

The reserve plans described below are pending approval by the Board of Regents. The 1997-98 operating budget of the UW System will be presented to the Board of Regents for approval when final legislative action on the 1997-99 biennial budget has been taken. Meanwhile, this request is being submitted in order to comply with the current statutory deadline of July 10th. Recent action taken by the Joint Committee on Finance would amend the reporting date specified by s.36.46 to September 15th.

Student fee funded reserves are projected to total \$36,181,369 as of June 30, 1997. This compares to a budgeted ending reserve balance of \$36,170,670 in the 1996-97 plan adopted by the Board of Regents on June 6, 1996 and approved by the Joint Committee on Finance and the DOA Secretary in August, 1996. The net difference of \$10,699 between budgeted and projected actual ending reserves is made up of both positive and negatives variances and is detailed on the attached table.

In 1997-98 the UW institutions plan to draw \$5.2 million from student fee funded reserves to purchase equipment, remodel facilities, carry out deferred maintenance, construct facilities, etc. As detailed in the attached table, this represents planned reductions of \$7.2 in some operations offset by increases of \$2.0 million in others.

¹ The first column on the attached table represents the projected 6/30/97 reserve in the 1996-97 plan adopted by the Board of Regents and approved by the Joint Committee on Finance and the DOA Secretary. The systemwide total appearing in the 1996-97 plan was actually \$39,732,654. This amount has been restated to \$36,170,670 to reflect three footnoted adjustments, primarily the exclusion of UW-Madison's intercollegiate athletics program which no longer receives student segregated fee funding.

² The two most notable variances involve segregated fee operations at UW-Milwaukee and at UW-La Crosse. The UW-Milwaukee variance is attributable to a delay in various Student Center remodeling projects. The UW-La Crosse variance is attributable to an advanced schedule for the Student Life Building and the fact that institutional funds were needed sooner than expected due to the timing of bond sales.

Budgeted ending reserve amounts for 1997-98 are shown in the next-to-last column and compared, in the final column, to the reserve maximums established under current UW System policy. In some cases the reserve maximums shown are those that were calculated at the time the 1996-97 budget was prepared; institutions were permitted to use the 1996-97 calculation if there have been no major changes that would have a significant impact on the reserve maximum.

The Governor's recommended budget for 1997-99 included a provision to eliminate the s. 36.46 requirement for the Board of Regents to seek approval from DOA and JCOF to approve all accumulations of auxiliary reserves from student fees. In response, the Joint Committee on Finance voted to amend s. 36.46 so that only those student fee funded auxiliary reserves that exceed 15% of the prior year's revenues must be reviewed by DOA and JCOF. With final legislative action pending, the attached table complies with the existing requirement to report all student fee funded auxiliary reserve accumulations.

Sincerely,

Marcia Bromberg,

Vice President of Finance

cc: President Lyall

Joint Committee on Finance Members

Regent Lubar Regent Orr Regent Grebe Regent Hempel Regent Barry Chancellors Vice Presidents

Institution Business Officers

Debbie Durcan

Kathi Sell Nathan Peters Donna Wong Doug Hendrix Bob Hanle, DOA Michael Heifetz, DOA

Bob Lang, LFB

Merry Larsen, LFB

Legislative Reference Bureau

Estimated 6/30/97 Balances and 1997-98 Plan University of Wisconsin System Student Fee Funded Reserves

	Approved Plan:	Estimated Variance:	Estimated Actual:	1997-98 Plan:	Plan:	Ceiling
Program	Projected 6/30/97 Reserve Balance	Approved Plan vs. Estimated Actual	Projected 6/30/97 Reserve Balance	Planned increase (Decrease)	Projected 6/30/98 Reserve Balance	Reserve
Housing	(200'290)	(1) 723,134	222,544	(605,900)	(383,356)	8,277,484
Segregated Fee Total Fee Funded	3,646,217 3,145,627	(2) <u>514,889</u> 1,238,023	<u>4,161,106</u> 4,383,650	(679,100) (1,285,000)	3,482,006 3,098,650	<u>4,936,789</u> 13,214,273
Housing Food Service Segregated Fee Total Fee Funded	4,534,359 304,343 <u>2,009,635</u> 6,848,337	221,760 52,545 (3) <u>2,276,335</u> 2,550,640	4,756,119 356,888 4,285,970 9,398,977	(558,385) (2,215) (2,921,899) (3,482,499)	4,197,734 354,673 <u>1,364,071</u> 5,916,478	6,504,974 1,289,600 <u>5,343,749</u> 13,138,323
Housing Food Service Segregated Fee Total Fee Funded	2,148,577 128,477 1,424,252 3,701,306	(133,127) (343,656) <u>613,259</u> 136,476	2,015,450 (215,179) <u>2,037,511</u> 3,837,782	(2,665) 661,126 (372,671) 285,790	2,012,785 445,947 <u>1,664,840</u> 4,123,572	3,110,990 599,250 1,887,792 5,598,032
Housing	950,437	(405,291)	545,146	(472,656)	72,490	2,154,817
rood Service Segregated Fee Total Fee Funded	642,233 1,592,670	(<u>81,136)</u> (486,427)	<u>561,097</u> 1,106,243	1 <u>87,869</u> (284,787)	<u>748,966</u> 821,456	1,944,572 4,099,389
Housing Food Service Segregated Fee Total Fee Funded	64,853 303,961 <u>6,049,270</u> 6,418,084	228,263 (79,725) (4,763,286) (4,614,748)	293,116 224,236 1,285,984 1,803,336	24,546 (74,169) 108,390 58,767	317,662 150,067 1,394,374 1,862,103	2,125,983 522,443 <u>5,228,223</u> 7,876,649
Housing Food Service Segregated Fee Total Fee Funded	376,827 102,950 <u>643,197</u> 1,122,974	(314,030) 166,944 (116,445) (263,531)	62,797 269,894 <u>526,752</u> 859,443	136,051 166,448 <u>(74,885)</u> 227,614	198,848 436,342 <u>451,867</u> 1,087,057	3,085,649 1,654,737 1,508,639 6,249,025
Housing	639,793	303,671	943,464	(99,479)	843,985	1,387,406
rood Service Segregated Fee Total Fee Funded	1,154,360 1,794,153	(413,655) (109,984)	740,705 1,684,169	(152,503) (251,982)	588,20 <u>2</u> 1,432,187	1,843,430 3,230,836

(1) Restated from (325,475) to reflect inclusion of apartment units where previously separate management and supervision have been merged. (2) Restated from 7,558,633 to reflect exclusion of MSN intercollegiate athliecs which no longer receives seg fee funding (3) Restated from 1,989,188 to reflect inclusion of MIL U-Pass program

University of Wisconsin System Student Fee Funded Reserves Estimated 6/30/97 Balances and 1997-98 Plan

Ceiling:	Reserve Maximums	2,281,073 1,102,214 5,600,977 8,984,264	1,599,013 923,493 1,328,115 3,850,621	1,924,855 539,722 2,018,600 4,483,177	1,944,530 524,696 2,488,531 4,957,757	602,988	1,178,453 1,778,453	2,671,756 1,203,994 2,335,943 6,211,693	150,000 150,000 350,000 650,000	37,821,518 8,510,149 37,990,825 84,322,492
an:	Projected 6/30/98 Reserve Balance	220,341 406,759 2,032,791 2,659,891	695,972 144,009 <u>995,871</u> 1,835,852	209,349 437,878 <u>1,536,834</u> 2,184,061	486,641 215,957 <u>1,422,549</u> 2,125,147	357,616	8 <u>21,/3/</u> 1,179,353	304,739 700,160 1,316,921 2,321,820	38,465 18,166 <u>304,158</u> 360,789	9,573,271 3,309,958 18,125,187 31,008,416
1997-98 Plan:	Planned Increase P (Decrease)	(41,076) 22,747 88,85 <u>6</u> 70,527	(25,972) (228,352) <u>95,189</u> (159,135)	34,400 (3,100) (156,550) (125,250)	(205,613) (105,308) (196,224) (507,145)	(2,584)	(64,732) (67,316)	100,691 237,564 <u>172,130</u> 510,385	(50,069) (38,434) (74,419) (162,922)	(1,768,711) 636,307 (4,040,549) (5,172,953)
Estimated Actual:	Projected 6/30/97 Reserve Balance	261,417 384,012 <u>1,943,935</u> 2,589,364	721,944 372,361 <u>900,682</u> 1,994,987	174,949 440,978 <u>1,693,384</u> 2,309,311	692,254 321,265 1,618,773 2,632,292	360,200	886,469 1,246,669	204,048 462,596 1,144,791 1,811,435	88,534 56,600 <u>378,577</u> 523,711	11,341,982 2,673,651 22,165,736 36,181,369
Estimated Variance:	Approved Plan vs. Estimated Actual	(58,190) 261,593 556,998 760,401	113,604 287,890 (<u>26,930)</u> 374,564	205,592 (67) 178,713 384,238	(130,902) (1,421) <u>238,499</u> 106,176	(978)	48,759	(24,845) (49,947) (55,150) (129,942)	(31,386) (18,230) <u>65,648</u> 16,032	697,275 275,926 (<u>962,502)</u> 10,699
Approved Plan:	Projected 6/30/97 Reserve Balance	319,607 122,419 1,386,937 1,828,963	608,340 84,471 <u>927,612</u> 1,620,423	(30,643) 441,045 1,514,671 1,925,073	823,156 322,686 1,380,274 2,526,116	361,178	836,710 1,197,888	228,893 512,543 1,199,941 1,941,377	119,920 74,830 <u>312,929</u> 507,679	10,644,707 2,397,725 23,128,238 36,170,670
	Program	Housing Food Service Segregated Fee Total Fee Funded	Housing Food Service	Segregated Fee Total Fee Funded	Housing Food Service Segregated Fee Total Fee Funded	Housing Food Service Segregated Fee Total Fee Funded	Housing Food Service Segregated Fee Total Fee Funded			
	inst.	PLT	RVF	STP	sto	SUP		WTW	SNO	TOTAL

2,036,007 (7,203,960)

increases: Decreases:



The University of Wisconsin System

Vice President for Finance 1752 Van Hise Hall 1220 Linden Drive Madison, Wisconsin 53706 (608) 262-1311 FAX (608) 262-3985

DATE:

July 11, 1997

TO:

Senator Brian Burke

Representative Scott Jensen

Co-Chairs, Joint Committee on Finance

Mark Bugher, Secretary Department of Administration

FROM:

Marcia Bromberg

Vice President for Finance

RE:

OUARTERLY POSITION REPORT, s. 16.505(2m)

(April 1, 1997 - June 1, 1997)

Under the provisions of s. 16.505(2m), the University of Wisconsin System (UWS) is reporting a net decrease of 14.66 full-time equivalent (FTE) positions supported by nonfederal gifts and grants, and a net increase of 37.86 FTE positions supported by federal contracts. The changes to authorization levels reflect adding new awards and deleting terminated awards. The June 1 report, not July 1, was used in the calculations because of reduced staffing levels during the summer session. As you know, filled and vacant position counts are not representative of the University's staffing levels during the months of June, July and August.

	Gifts and Grants	Federal Contracts	Total
April 1, 1997 Authorization:	2,165.30	3,214.68	5,379.98
Total Change:	(14.66)	37.86	23.20
June 1, 1997 Authorization	2,150.64	3,252.54	5,403.18
	Auxiliary & Operating Receipts	Federal Indirect Cost Reimbursement	Total
1996-97 Budget Authorization:	3,139.82	314.62	3,454.44
Total Change:	_	_	****
June 1, 1997 Authorization:	3,139.82	314.62	3,454.44

Enclosed are schedules that show authorization changes by institution as well as select award information. All positions added to staff new awards, or deleted from terminated awards are separately identified.

Enclosures

cc: President Lyall

Gail Riedasch

Vice Presidents

Deborah Durcan

Martin Olle

Freda Harris

David Loppnow

Sal Carranza

Legislative Reference Bureau

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Period Covered: April 1, 1997 - June 1, 1997

GIFTS & GRANTS

AWARD PERIOD	10/01/95-Open Award	11/01/95-04/14/97	09/01/95-Open Award	02/01/96-04/30/97		03/03/96-06/30/97	04/01/96-03/31/98	01/01/96-Open Award	07/01/96-06/30/97		07/01/96-06/30/97	04/01/95-Open Award	04/01/95-Open Award		07/01/96-07/30/97	01/01/95-12/31/97	01/01/93-06/30/94	10/01/96-09/30/97	01/97-01/98
AWARD	482,419	50,000	20,000	40,000		39,800	299,133	24,000	41.861		20,000	99,949	35,750		150,000	137,000	10,000	65,000	160,000
FUND NUMBER	133-AE16	133-AF07	133-AF35	133-AF58		133-AJ31	133-AL23	133-AL77	133-AN83		133-AU15	133-2541	133-2668		133-AT58	133-R978	133-1741	133-1724	133-BB13
FTE ADDITIONS/ DELETIONS	(3.20)	(0.58)	(1.00)	(1.00)		(1.25)	(3.20)	(2.00)	(1.00)	•	(3.00)	(1.50)	(2.00)	(19.73)	1.00	0.81	(0.11)	(0.05)	1.65
AWARD TITLE	Development of New Technologies for Mastitis Prevention	SOL-GEL Chemistry	Prediction of Neonatal Jaundice	UNA Ligase Cofactors in Growth Retardation and	-	I emporal Relationship of Dieting, Stress, Binge- Eating, and Alcohol Use in Young Women	X-Ray Microbeam Facility	Challenging the Late Blight Attack Confronting U. Potato Production	Novel Protein Histidine Kinase-Phosphatase	Cascadein in the Pancreatic B Cell	Evaluation of the Status of the Gypsy Moth Fugal Pathogen	NARSAD Established Investigator Award	A Randomized Open-Label Comparison of	nninocort Aqua Pump Spray Versus Beconase	A Framework for Enhancing "Professional Partnerships" between Milw. Public Schools &	CVV-MS Center for Teacher Education Fish Farm Program	Challenges & Choices Wkshp	Family Nursing Center	a Industrial Recycling Assistance Program
AWARDING AGENCY	Aquila Biopharmaceuticals	SSI Technologies, Inc.	Manh of Dings			Auconom Deverage Medical Kesearch Foundation	ATR Human Information Processing Research Labs	Wisconsin Potato Industry Board	American Diabetes Association		Wisconsin Department of Agriculture Trade and Consumer Protection	National Alliance for Research on Schiziphrenia and Depression	ASTRA USA, Inc.		The Joyce Foundation	Milw. County House of Correction	UWEC Foundation	Matsnifeld Research Fd	WI Recycling Market Development Boa
NOILUTITS IN NO	MADISON													MADISON (Subtotal)	MILWAUKEE	MILWAUKEE (Subtotal)	EAU CLAIRE	EAU CLAIRE (Subtotal)	GREEN BAY GREEN BAY (Subtotal)

Period Covered: April 1, 1997 - June 1, 1997

GIFTS & GRANTS

AWARD PERIOD	ı	01/01/97-12/31/97 06/01/96-08/31/98	Open	07/01/96-06/30/97	01/16/97-01/15/98	07/01/96-06/30/97 01/01/96-12/31/96	Indefinite	09/01/95-Open	10/01/96-09/30/97	04/01/95-Pending		10/24/91-Open
AWARD AMOUNT	i	150,000 62,000	Open	15,000	93,916	8,000 3,500	104,040	35,083	99,858	276,860		0
FUND	<u>&</u>	133 133	133-6937	133-8607	133	133	133	334 / 29	334/34	334 / 26		133-T230
FTE ADDITIONS/ DELETIONS	0.90	0.05 (0.13) (0.08)	(0.10)	(0.02)	1.00	(0.50) (0.16) (0.66)	0.50	0.35	0.26		(0,54)	0.07
AWARD TITLE	Archaeology Center	Living Healthy Program Nursing Home Setting	Center for Survey and Marketing Research	Project Certify	University of Minnesota MUCIA Project	Multi-State Aquatic Resource Information System Becoming An Outdoors Woman	Nakatani Center	RTK Technologies for Societe Mexel of Acute Toxicity of Mexel 432 to Three Non-target	Freshwater Organisms Bioavailability and Toxicity of Silver to Benthic Organisms in Freshwater Systems Containing	Sediments of Different Characteristics Sediment Toxicity Testing Program for Phthalate Esters		Dean's Discretionary Fund
AWARDING AGENCY	Various Donors	Winnebago County Helen Bader Foundation	Multiple Donors	Wis Department of Public Instruction	University of Minnesota	WI DNR National Wild Turkey Federation	Stout Foundation	RTK Technologies for Societe Mexel of	France NAPM	CMA		Multiple Donors
UWINSTITUTION	LA CROSSE LA CROSSE (Subtotal)	OSHKOSH OSHKOSH (Subtotal)	PARKSIDE PARKSIDE (Subtotal)	PLATTEVILLE PLATTEVILLE (Subtotal)	RIVER FALLS RIVER FALLS (Subtotal)	STEVENS POINT STEVENS POINT (Subtotal)	STOUT STOUT (Subtotal)	SUPERIOR			SUPERIOR (Subtotal)	CENTERS CENTERS (Subtotal)

Period Covered: April 1, 1997 - June 1, 1997

GIFTS & GRANTS

AWARD PERIOD	07/01/96-06/30/97 07/01/95-09/30/97 10/01/96-09/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/97 07/01/96-06/30/98 02/01/95-06/30/98 02/01/96-06/30/98	
AWARD	96,695 1,315,000 326,701 400,000 562,953 588,140 960,327 75,000 36,801 75,600 205,821 75,600 500,000 40,000 18,500 65,440	
FUND	133-AS11 133-AW25 133-AW25 133-AW25 133-AW39 133-AZ08 133-AZ08 133-AZ08 133-AX53 133-AW36 133-AW36 133-AW36 133-AW36 133-AW36 133-AW36	
FTE ADDITIONS/ DELETIONS	(1.00) (0.24) (0.24) (0.20) (0.95) (0.05) (0.05) (0.00) (0.10) (0.10) (0.12) (0.12) (0.14) (0.03)	
AWARD TITLE	Servital Records General Support Community Service Grant State of the Union Program Production Services Block Grant Acquisitions Program Underwriting Programming Support Support of Extension Agents Pollution Prevention Wisc Stormwater Manual Nonpoint Source Poll. Educ. Nonpoint Source Poll. Educ. Eval. High Sch. Fin. Plan. Prog. Healthy Families Walworth Co. 4-H Child Dev. Proj. Admin & Fundraising Exp. Nature in the Parks Nonpoint Source Poll. Southern	
AWARDING AGENCY	Wis Division of Health & Social Service Vital Records Multiple Donors Public Broadcasting Service Friends of WHA-TV Block Grant A Multiple Donors Wisconsin Public Radio Association Wisconsin Dept. of Commerce Wisconsin Dept. of Commerce Wisconsin Dept of Natural Resources Wisc Dept of Natural Resources Univ of Minnesota Univ of Minnesota Univ of Minnesota Wisc Dept of Natural Resources Univ of Minnesota Univ of Minnesota Wisc Dept of Natural Resources Nature in the I Wisc Dept of Natural Resources Nonpoint Sour	
UWINSTITUTION	EXTENSION (Subtotal)	GRAND TOTAL

Period Covered: April 1, 1997 - June 1, 1997

AWARD PERIOD	05/01/94-09/30/97 08/01/94-07/31/97 09/30/94-08/30/97	09/01/94-08/31/98 09/01/96-08/31/98 07/31/96-07/30/99	09/30/96-09/30/97 01/01/97-12/31/97 01/01/97-03/31/98 03/24/97-09/30/97 04/01/97-03/31/98	04/01/87-03/31/98 01/29/97-10/31/97	09/30/96-09/29/97 04/01/96-03/31/97 09/01/96-08/31/97	09/01/96-08/31/97 09/01/94-08/31/95 09/13/93-07/31/96 06/01/96-05/31/97
AWARD AMOUNT	459,971 452,350 314,971	210,917 140,993 124,937	227,204 1,762,260 186,963 223,443 75,000	163,247 152,100	219,205 272,639 22,884	233,556 226,753 607,150 252,275
FUND	144-EC03 144-EJ32 144-EN11	144-EN74 144-FQ20 144-FU48	144-GC04 144-GC51 144-GD15 144-GF33 144-GF33	144-GG09 144-GG62	144-FY18 144-FN87 144-GB14	144-1909 144-1867 144-1910
FTE ADDITIONS/ DELETIONS	3.76 2.25 1.00	3.41 0.91	1.50 12.85 2.00 2.05 2.05 2.38	2.18 3.00 40.29	(0.50) (0.80) (1.00) (2.30)	(0.02) (0.02) 0.15 (0.03) 0.08
AWARD TITLE	Paradise - A Parallel Information System for EOS Renal Metabolism and Nephrotoxicity Preclinical Evaluation of Indeterminate Endpoints and Their Modulation by Chemopreventative Agents	Evolution of Individual Variation in Behavior Communications Office and Program Coordinatio Compliant Substrates: A Comprehensive Approato Their Formation and Exploitation	000 00 0	< ≤	The Great Lakes Human Health Effects Research Program (Ojibwa Health Study II) Environmental Health Sciences Core Grant Aquaculture Wastes & Effluents	Spec Svcs Proj 96-97 Spec Svcs Proj 94-95 Int'l Ed 4 Upward Bound-6
AWARDING AGENCY	NASA DHHS, PHS, National Institutes of Hea DHHS, PHS, National Institutes of Hea	National Science Foundation Commerce, National Oceanic and Atmospheric Administration DOD, Navy	DHHS, PHS, National Institutes of Hea Education, Dept. of DHHS, PHS, National Institutes of Hea DHHS, PHS, National Institutes of Hea NASA DHHS, PHS, National Institutes of Hea	DHHS, PHS, National Institutes of Hea NASA	DHHS, PHS, Center for Disease Contr DHHS, PHS, National Institutes of Hea Agriculture, Dept. of	ED ED USIA ED
UWINSTITUTION	MADISON			MADISON (Subtotal)	MILWAUKEE MILWAUKEE (Subtotal)	EAU CLAIRE EAU CLAIRE (Subtotal)

Period Covered: April 1, 1997 - June 1, 1997

AWARD <u>Period</u>	01/96-12/96 01/97-12/97 08/94-08/97 09/96-09/97 09/95-09/97 10/95-09/96	11/96-10/97 06/96-06/97 09/96-09/97	07/01/96-06/30/97 07/01/96-06/30/97 01/01/97-12/31/97	05/17/94-09/30/97 09/15/95-09/30/97 03/01/97-07/15/98	Indefinite 05/01/96-03/31/97 08/18/96-08/17/97 09/091/96-08/30/97
AWARD AMOUNT	76,133 80,805 101,935 27,309 31,774 93,284 112,000 111,548 161,250	236,802 234,300 235,851	44,033 2,387,532 1,359,501 83,013	62,800 50,000 9,904	160,328 149,960 707,649 501,486
FUND	144-FK96 144-GD02 144-FP94 144-FP95 144-FH81 144-FK19 144-FK19	144-GB12 144-FP62 144-FX29	4 44	144-ES81 144-GH45	4 4 4 4 4 4 4 4
FTE ADDITIONS/ DELETIONS	(1.60) 1.60 (0.88) (0.01) 1.00 (0.14) (0.50) (2.40)		0.65 (1.72) 0.65 1.79	1.94 0.98 (0.50) 0.42 0.90	(1.00) (0.20) (0.20)
AWARD TITLE	Small Business Development Center Small Business Development Center An Assessment of the Overland Dispersal of Zebr MusselsLakes Green Bay Field Office Zebra Mussel Outreach Plan Academic Research Enhancement Rewards Child Weffare Training: Competency Based TrainingChild Weffare Long Term Child Weffare School to Work Program School to Work Program	Student Support Services	Nebraska Study Head Start 30th Grant Regional Training SBDC	Phase 2 - Vermont Rail Feasibility Study Incompatibility Genes: Stored Product Pest-Tribolium Native American Agriculture Sites in SE Wis.	Financial Aid MTT Program/Co-op Extension Research & Training UW-Centers 97 Rehab Cont Ed UW-Centers 97
AWARDING AGENCY	Small Business Administration Small Business Administration UW Sea Grant Institute UW Sea Grant Institute U.S. Department of Human Services U.S. Department of Human Services U.S. Department of Education U.S. Department of Education	U.S. Department of Education U.S. Department of Education U.S. Department of Education	Interior Winnebago County HHS SBDC	Longwoods International (TRANS) U.S. Department of Agriculture State Historical Society of Wisconsin	Admin Funds USDA/Extension DE/NIDRR DE
UWINSTITUTION	GREEN BAY	GREEN BAY (Subtotal)	LA CROSSE LA CROSSE (Subtotal) OSHKOSH	OSHKOSH (Subtotal) PARKSIDE PARKSIDE (Subtotal)	STOUT

Period Covered: April 1, 1997 - June 1, 1997

AWARD PERIOD	10/01/96-09/30/97 01/01/97-06/30/97 04/01/97-06/30/97	01/08/97-09/30/97	01/08/97-09/30/97	10/01/94-09/30/97		03/08/965-06/30/97 09/01/96-04/30/97	05/01/97-04/30/98	09/01/96-08/31/97 07/01/96-06/30/97	/6/05/00-96/LO//0	09/01/96-08/31/97 08/21/96-05/27/97		11/01/95-10/31/00 10/01/96-09/30/97
AWARD	600,000 173,363 24,989	38,863	20,559	96, 777		10,500 95,536	80,617	185,400 54,472	112,894	331,431 64,909		152,490 105,600
FUND	441 441 441	444197	444/96	444 / 90		44 44 44	144	44 1 4	4	144-FY33 144-FY36		144-FJ33 144-GB87
FTE ADDITIONS/ DELETIONS	(1.00) 1.50 0.50 (0.50)	(1.10)	(0.75)	0.50 ty	(1.35)	(0.50)	0.50	0.50	0.24	(0.07) (0.07)	(0.14)	(0.03)
AWARD TITLE	NWMOC 97 Computer-Based Training #1 WI Career Centers	Literature Update and Development of Proposed Water Quality Criteria Document for Atrazine, Diazinon and Nonylphenol for Protection of Aquatic Life	Literature Update and Development of Proposed Water Quality Criteria Document for Tributylin, (TBT) for Protection of Aquatic Life	Microbial Degradation of Environmental Contaminants, and Management of Water Quality	בן בשעמ פו בן ביאנימן פס פו	Goals 2000 Pre-Srv Educ NiMH2 - Waraczynskí	NIMH2 - Waraczynski	2996 Talent Search Project Select 96/7	אס אפוויין באל אס אס אפין אין אין אין אין אין אין אין אין אין א	Student Support Services Community College Program		Wis Humanities Gen Oper Wis Cancer Registry Enh. Prog.
AWARDING AGENCY	Dept of Commerce State of Wisconsin-DWD Department of Education	Great Lakes Environmental Center	Great Lakes Environmental Center	ЕРА		U.S. Department of Education U.S. Dept Health & Human Services - Nat'l Institute of Mental Health	U.S. Dept Health & Human Services - Nat1 Institute of Mental Health	U.S. Department of Education U.S. Department of Education U.S. Department of Education	o.c. Department of guidation	Department of Education Youth for Understanding International Exchange	b i	Wisconsin Humanities Council (NEH) Wis Div of Health & Family Serv (DHHS PHS CDC)
<u>UW INSTITUTION</u>	STOUT (Continued) STOUT (Subtotal)	SUPERIOR			SUPERIOR (Subtotal)	WHITEWATER			WHITEWATER (Subtotal)	CENTERS	CENTERS (Subtotal)	EXTENSION

Period Covered: April 1, 1997 - June 1, 1997

UW INSTITUTION	AWARDING AGENCY	AWARD TITLE	FTE ADDITIONS/ <u>DELETIONS</u>	FUND	AWARD	AWARD PERIOD
EXTENSION (Continued)	Small Business Admin (SBA)	Small Bus Dev UW-Centers.	0.02	144-6096	1,482,497	01/01/97-12/31/97
	WDHFS (USDA)	Community-Based Hunger Prev.	90:0	144-GF45	3,508	01/01/97-09/30/97
	WDHFS (DED)	Milwaukee Family Proj.	1.00	144-GD86	80,000	01/01/97-12/31/97
	Wisc. DWD (USDA)	Family Nutrition Dane County	0.15	144-FW25	84,508	10/01/96-09/30/97
	Wisc. DWD (USDA)	Family Nutrition Proj.	5,31	144-FW17-49	3,241,862	10/01/96-09/30/97
	US DHHS/PHS/SAMHSA	Statewide Youth Future Coal.	1.25	144-FX54	238,526	76/62/60-96/06/60
	USDA	Smith Lever Program	(6.21)	143-Var	1	10/01/96-09/30/97
	HACM (HUD)	Hillside Terrace	(0.01)	144-EU99	335,000	07/01/94-06/30/99
	CSREES (USDA)	Youth - Urban SE District	(0:20)	143-T230	54,714	07/01/96-06/30/97
EXTENSION (Subtotal)			1,56			
GRAND TOTAL			37.86			



July 17, 1997

Governor Tommy G. Thompson State Capitol - 115 East Post Office Box 7863 Madison, WI 53707

Dear Governor Thompson:

Section 16.54(8r)(b) FEDERAL CONTRACTS of the Wisconsin Statutes requires the University of Wisconsin System to report quarterly to the Governor and the co-chairpersons of the Joint Committee on Finance the date, amount and purpose of federal moneys accepted by the Board of Regents during the preceding quarter.

Enclosed are the summary reports for awards accepted for the fourth quarter of 1996-97 by the Board of Regents. Federal awards received for the period totaled \$84,826,067. Year-to-date figures are up by \$1.4 million. This represents a 1% increase over fiscal year 1995-96.

Sincerely,

Marcia W. Bromberg Vice President

Enclosures

cc: Senator Brian Burke

Representative Scott Jensen

President Lyall Vice Presidents Secretary Bugher David Loppnow Mike Heifetz JULY 11, 1997 FEDERAL GRANTS AND CONTRACTS SUMMARY ITEMS PROCESSED 05-17-97 THROUGH 06-20-97

ES0122

NOT FOR THE MOTERIAL OF	LIBRARIES	MINC.	PHY . PLANT	RESEARCH	STUDENT AID	CNY NO.	IOIAL
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51,745	-0-	-0-	-0-	106,761	-0-	-0-	164,228
-0-	0,	-0-	0	÷ O -	, O	0-	588,418
243,672	-0-	22,000	-0-	-0-	(21,539)	-0-	244,133
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2,596,102	-0-	1,265,777	291,700	28,719,293	564,650	-0-	33,701,648
305,725	0	13,500	; O f	281,805	-0-	0-	601,030
220,267	-0-	-0-	- O -	72,434	-0-	-0-	292,701
48,017	0	i O i	208,535	· O -	0 1	-0-	256,552
-0-	-0-	-0-	-0-	20 C) 10	39,499	-0-	39,499
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3,572,558	i O i	1,568,352	500,235	29,217,775	603,203	0	36,363,450
3, 5, 5, 5, 6, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	-0- -0- -0- -0- -0- -0- -0- -0-			-0- 22,000 -0- 1,265,777 2 -0- 13,500 -0000000000-	-0000000000-	-0000000000-	-0000000000-

JUNE 6, 1997 FEDERAL GRANTS AND CONTRACTS SUMMARY TTEMS PROCESSED 04-19-97 THROUGH 05-16-97	
ESO122	

	EXTENSION INSTRUCTION	NSTRUCTION	LIBRARIES	MISC.	PHY, PLANT	RESEARCH	STUDENT AID	UNRES.	TOTAL
CNTL ADM/UNIV WIDE	Q	O	-0-	-0-	-0-	-O-	-0-	-0-	-0-
CENTER SYSTEM	i O i	-0-	0	0 1		0-	21,323	0	21,323
EAU CLAIRE	1,644	377,140	-0-	-O+	1 O f	25,000	34,146	O	437,930
EXTENSION	327,625	0	1 O	! O ;	0	: O :	0 1	0	327,625
GREEN BAY	-0-	-0+	-0-	-0-	70+	O ~~	5,760	-0-	5,760
LA CROSSE	-0-	-0-	0	! O i	0	86,096		, O	960,98
MADISON	80,267	642,798	-0-	279,420	-0-	19,182,134	27,417	-0-	20.212.036
MILWAUKEE	-0-	185,000	0	15,500	i O i	760,830	16,795		978,125
OSHKOSH	159,486	-0-	*O *	-0-	01	-0-	-0-	-0-	159,486
PARKSIDE	0-	14,798	-0-	0	O	35,954	14,564	- O -	65,316
PLATTEVILLE	19,000	-0-	-0-	-0-	-0-	.0.	-0-	-0-	19,000
RIVER FALLS	ò	-0-	0	i O	-0-	t O F	l O i	1 O 1	l O l
STEVENS POINT	-0-	2,500	-0-	-0-	-0-	19,187	41,260	-0-	62,947
STOUT	181,276	-0-	0,	0	· O	120,917	1,443,170	0-	1,745,363
SUPERIOR	-0-	-0-	-0-	101	-0-	٠.٥٣	-0-		,,0,,
WHITEWATER	0	0	-0-	-0-	O	80,617	, O	O .	80,617
UUN 1997 FEDERAL TOTAL	769,298	1,222,236	-0-	294,820	0	20,310,735	1,604,435	0	24,201,624
						***************************************		AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	A TOTAL AND

ES0122

	EXTENSION INSTRUCTION	NSTRUCTION	LIBRARIES	MISC.	PHY, PLANT	RESEARCH	STUDENT AID	UNRES.	TOTAL
CNTL ADM/UNIV WIDE	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
CENTER SYSTEM	Ů O	-0-	-0-	-0-	-0-		5,016	0 1	5,016
EAU CLAIRE	6,200	24,266	-0-	-0-	-0-	218,150	-0-	-0-	248,616
EXTENSION	76,050	-0-	0	0-	0	-0-	-0-	0-	76,050
GREEN BAY	+0	-0-	-0-	750	-0-	-0-	-O.,	+0-	750
LA CROSSE	813,619	33,450	0	0	-0-	110,957	0	0	958,026
MADISON	1,384,114	239,877	-0-	268,195	-0-	18,817,666	(2,835)	-0-	20,707,017
MILWAUKEE	-0-	8,307	-0-	0	0 -	1,120,426	(208)	-0-	1,128,224
OSHKOSH	-0,-	-0-	-0-	* O *	1 O =	5,000	-0-	-0-	5,000
PARKSIDE	0	0-	-0-	0-	0	-0-	0 1	-0-	0
PLATTEVILLE		-0-	-0-	-0-	-0-	= O +	-0-	-0-	-0-
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STEVENS POINT	219,166	-0-	-0-	-0-	-0-	-0-	906,128	-0-	1,125,294
STOUT	-0-	O	0	Ö	0	2,000	-0-	, O	2,000
SUPERIOR	70-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
WHITEWATER	0	0	0 1	5,000	0) O 1	-0-	Ö	5,000
MAY 1997 FEDERAL TOTAL	2,499,149	305,900	0	273,945	-0	20,274,199	907,800	-O-	24,260,993
									A THE REAL PROPERTY OF THE PRO



The University of Wisconsin System

Vice President for Business and Finance

1752 Van Hise Hall 1220 Linden Drive Madison, Wisconsin 53706 (608) 262-1311 FAX (608) 262-3985

July 31, 1997

Senator Brian Burke Representative Scott Jensen Co-Chairs, Joint Committee on Finance

Mark D. Bugher, Secretary Department of Administration

Dear Senator Burke, Representative Jensen and Secretary Bugher:

This letter is to notify you that the Board of Regents has now approved the University of Wisconsin System's 1997-98 plan for auxiliary reserves that was submitted to you on July 2, 1997 (in order to comply with the July 10th reporting deadline established by s. 36.46, Wisconsin Statutes). We noted at that time that the plans were pending approval by the Board of Regents. That approval was granted on July 25, 1997, when the Board adopted the UW System's 1997-98 annual operating budget.

The plan previously submitted is re-attached with two minor corrections: the gross amount of planned reserve decreases (bottom of page 2) should be \$7,208,960 rather than \$7,203,960; and, the amount in footnote 2 (bottom of page 1) should be \$7,053,533 rather than \$7,558,633. Neither of these items affects the estimated actuals as of 6/30/97, the variances from the 1996-97 plan, the planned increases/decreases shown for individual operations for 1997-98, nor the net amount of the planned decrease shown for 1997-98.

Sincerely,

Marcia Bromberg,

Vice President of Finance

cc: Debbie Durcan

Kathi Sell

Nathan Peters

Donna Wong

Doug Hendrix

Bob Hanle, DOA

Michael Heifetz, DOA

Bob Lang, LFB

Merry Larsen, LFB

Legislative Reference Bureau

University of Wisconsin System Student Fee Funded Reserves Estimated 6/30/97 Balances and 1997-98 Plan

		Approved Plan:	Estimated Variance:	Estimated Actual:	1997-98 Plan	Plan:	Ceiling:
Inst.	Program	Projected 6/30/97 Reserve Balance	Approved Plan vs. Estimated Actual	Projected 6/30/97 Reserve Balance	Planned Increase (Decrease)	Projected 6/30/98 Reserve Balance	Reserve
MSN	Housing	(500,590)	(1) 723,134	222,544	(605,900)	(383,356)	8,277,484
	Segregated Fee Total Fee Funded	3,646,217 3,145,627	(2) <u>514,889</u> 1,238,023	4,161,106 4,383,650	(679,100) (1,285,000)	3,482,006 3,098,650	<u>4,936,789</u> 13,214,273
Ħ	Housing Food Service Segregated Fee Total Fee Funded	4,534,359 304,343 2,009,635 6,848,337	221,760 52,545 (3) <u>2,276,335</u> 2,550,640	4,756,119 356,888 4,285,970 9,398,977	(558,385) (2,215) (2,921,899) (3,482,499)	4,197,734 354,673 <u>1,364,071</u> 5,916,478	6,504,974 1,289,600 <u>5,343,749</u> 13,138,323
EAU	Housing Food Service Segregated Fee Total Fee Funded	2,148,577 128,477 <u>1,424,252</u> 3,701,306	(133,127) (343,656) <u>613,259</u> 136,476	2,015,450 (215,179) <u>2,037,511</u> 3,837,782	(2,665) 661,126 (<u>372,671)</u> 285,790	2,012,785 445,947 <u>1,664,840</u> 4,123,572	3,110,990 599,250 1,887,792 5,598,032
GBY	Housing Food Service Segregated Fee Total Fee Funded	950,437 642,233 1,592,670	(405,291) (81,136) (486,427)	545,146 <u>561,097</u> 1,106,243	(472,656) 187,869 (284,787)	72,490 <u>748,966</u> 821,456	2,154,817 1,944,572 4,099,389
PA	Housing Food Service Segregated Fee Total Fee Funded	64,853 303,961 <u>6,049,270</u> 6,418,084	228,263 (79,725) (4,763,286) (4,614,748)	293,116 224,236 1,285,984 1,803,336	24,546 (74,169) 108,390 58,767	317,662 150,067 <u>1,394,374</u> 1,862,103	2,125,983 522,443 <u>5,228,223</u> 7,876,649
OSH	Housing Food Service Segregated Fee Total Fee Funded	376,827 102,950 <u>643,197</u> 1,122,974	(314,030) 166,944 (11 <u>6,445)</u> (263,531)	62,797 269,894 <u>526,752</u> 859,443	136,051 166,448 (74,895) 227,614	198,848 436,342 451,867 1,087,057	3,085,649 1,654,737 1,508,639 6,249,025
P X S	Housing Food Service Segregated Fee Total Fee Funded	639,793 1,154,360 1,794,153	303,671 (413,655) (109,984)	943,464 740,705 1,684,169	(99,479) (1 <u>62,503)</u> (251,982)	843,985 <u>588,202</u> 1,432,187	1,387,406 1,843,430 3,230,836
	000000000000000000000000000000000000000	6	(Lookoo)				

Restated from (325,475) to reflect inclusion of apartment units where previously separate management and supervision have been merged.
 Restated from 7,053,533 to reflect exclusion of MSN intercollegiate athliecs which no longer receives seg fee funding.
 Restated from 1,989,188 to reflect inclusion of MIL U-Pass program.

University of Wisconsin System Student Fee Funded Reserves Estimated 6/30/97 Balances and 1997-98 Pian

Ceiling	Reserve Maximums	2,281,073 1,102,214 <u>5,600,977</u> 8,984,264	1,599,013 923,493 1,328,115 3,850,621	1,924,855 539,722 <u>2,018,600</u> 4,483,177	1,944,530 524,696 2,488,531 4,957,757	602,988	1,175,465 1,778,453	2,671,756 1,203,994 <u>2,335,943</u> 6,211,693	150,000 150,000 350,000 650,000	37,821,518 8,510,149 37,990,825
Plan;	Projected 6/30/98 Reserve Balance	220,341 406,759 2,032,791 2,659,891	695,972 144,009 995,871 1,835,852	209,349 437,878 1,536,834 2,184,061	486,641 215,957 <u>1,422,549</u> 2,125,147	357,616	821,737 1,179,353	304,739 700,160 1,316,921 2,321,820	38,465 18,166 304,158 360,789	9,573,271 3,309,958 18,125,187
1997-98 Plan	Planned Increase (Decrease)	(41,076) 22,747 <u>88,856</u> 70,527	(25,972) (228,352) <u>95,189</u> (159,135)	34,400 (3,100) (156,550) (125,250)	(205,613) (105,308) (196,224) (507,145)	(2,584)	(64,732) (67,316)	100,691 237,564 <u>172,130</u> 510,385	(50,069) (38,434) (74,419) (162,922)	(1,768,711) 636,307 (4,040,549)
Estimated Actual:	Projected 6/30/97 Reserve Balance	261,417 384,012 1,943,935 2,589,364	721,944 372,361 <u>900,682</u> 1,994,987	174,949 440,978 1,693,384 2,309,311	692,254 321,265 1,618,773 2,632,292	360,200	886,469 1,246,669	204,048 462,596 1,144,791 1,811,435	88,534 56,600 <u>378,577</u> 523,711	11,341,982 2,673,651 22,165,736
Estimated Variance:	Approved Pian vs. Estimated Actual	(58,190) 261,593 <u>556,998</u> 760,401	113,604 287,890 (26,930) 374,564	205,592 (67) 178,713 384,238	(130,902) (1,421) <u>238,499</u> 106,176	(978)	49 <u>,759</u> 48,781	(24,845) (49,947) (55,150) (129,942)	(31,386) (18,230) <u>65,648</u> 16,032	697,275 275,926 (962,502)
Approved Plan:	Projected 6/30/97 Reserve Balance	319,607 122,419 1,386,937 1,828,963	608,340 84,471 <u>927,612</u> 1,620,423	(30,643) 441,045 1,514,671 1,925,073	823,156 322,686 1,380,274 2,526,116	361,178	836,710 1,197,888	228,893 512,543 1,199,941 1,941,377	119,920 74,830 <u>312,929</u> 507,679	10,644,707 2,397,725 23,128,238
	Program	Housing Food Service Segregated Fee Total Fee Funded	Housing	Food Service Segregated Fee Total Fee Funded	Housing Food Service Segregated Fee Total Fee Funded	Housing Food Service Segregated Fee Total Fee Funded	Housing Food Service Segregated Fee			
	Inst.	₽Ľ٦	RVF	S G T S	STO	SUP		WTW	o N N	TOTAL

2,036,007 (7,208,960)

increases: Decreases:



The University of Wisconsin System

Vice President for University Relations 1708 Van Hise Hall, 1220 Linden Drive Madison, Wisconsin 53706 FAX (608) 262-3985 (608) 262-0766

September 5, 1997

Memorandum

TO:

Senator Brian Burke, Co-Chair, Joint Committee on Finance Representative Scott Jensen, Co-Chair, Joint Committee on Finance Secretary Mark Bugher, Department of Administration Secretary Jon E. Litscher, Department of Employment Relations

FROM: President Katharine C. Lyall Will RE: Report Required by Section 36.09(1)(j), Wisconsin Statutes

The enclosed Report on 1996-97 Base Salary Adjustments to Recognize Competitive Factors, required by Section 36.09(1)(j), Wisconsin Statutes, was approved by the Board of Regents on September 5, 1997 for transmittal to you.

Enclosure

cc:

Legislative Fiscal Bureau

Secretary of the Board of Regents

Attachment 1

UNIVERSITY OF WISCONSIN SYSTEM BASE SALARY ADJUSTMENTS TO RECOGNIZE COMPETITIVE FACTORS SUMMARY OF ADJUSTMENTS GRANTED DURING 12-MONTHS ENDED JUNE 30, 1997

	NUMBER OF <u>ADJUSTMENTS</u>	ANNUAL <u>COST</u>
MADISON	59	\$481,582
MILWAUKEE	41	115,576
STEVENS POINT	1	5,000
STOUT	2	8,047
EXTENSION	<u>2</u>	17,954
TOTAL	105	\$628,159



The University of Wisconsin System

Office of the President 1720 Van Hise Hall, 1220 Linden Drive Madison, Wisconsin 53706-1559 Tel (608) 262-2321 Fax (608) 262-3985

E-mail: klyall@ccmail.uwsa.edu

September 15, 1997

TO:

Senator Brian Burke, Co-Chair

Representative Scott Jensen, Co-Chair

Joint Committee on Finance

FROM:

President Katharine C. Lyall

SUBJECT:

1996-97 Report on Undergraduate (Course Drop Rates

At the September 1988 Hearing, S13.10, of the Legislative Joint Committee on Finance, the committee passed a motion which directed the UW System to report annually to the committee beginning April 1, 1990, on campuses where the undergraduate course drop rates exceed 5 percent and on steps being taken to achieve a 5 percent drop rate at those institutions. The reporting date was changed to August 1 by the Joint Committee on Finance on September 13, 1990.

In Spring 1995-96, two institutions, UW-Stout and UW Colleges, exceeded the 5 percent threshold, at 5.2% and 9.2% respectively. The Fall 1996-97 drop rate for UW Colleges was 8.3%.

UW System continues to monitor the drop rates and it has asked the UW Colleges and UW-Stout to take action that will reduce their drop rates. UW Colleges plan to examine why the rates are above 5 percent and design activities to improve retention. UW-Stout will continue to monitor the situation and consider adjustments to drop policies.

UW System continues to meet the intent of the Joint Committee on Finance's motion to reduce the number of dropped credits to below the 5 percent threshold. We are pleased to report that the systemwide average drop rate continues to decline steadily; between Fall 1988 and Fall 1996 from 5.5 percent to 3.6 percent. The spring term rates have fallen from 5.1 percent to 4.0 percent. On an annualized basis, the drop rate has fallen from 5.3 percent (1988-89) to 3.8 percent (1995-96).

Enclosure

cc:

Members, Joint Committee on Finance
David J. Ward, Senior Vice President
Sharon Wilhelm, Interim Director
UW Chancellors
David Loppnow, Legislative Fiscal Bureau
Merry Larsen, Legislative Fiscal Bureau
Robert Hanle, Department of Administration
Michael Heifetz, Department of Administration

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REPORT ON 1996-97 UNDERGRADUATE DROP RATES

EXECUTIVE SUMMARY

BACKGROUND

In September 1988, the University of Wisconsin Board of Regents passed Resolution 5045 in response to 1987-88 Wisconsin Act 27. Resolution 5045 "directs the UW System Administration to:

- 1. Monitor course drop rates at all UW System institutions.
- 2. Require all UW System institutions to reduce or maintain course drop rates during any academic year at no more than five percent of the credit hours registered at the close of the tenth day of classes at the beginning of the fall and spring terms.
- 3. Directs all UW System institutions whose drop rates exceed five percent, effective in the fall of 1989, to develop and implement plans to reduce the drop rate to five percent. Such plans will be subject to the review and approval of System Administration.
- 4. Report to the Board of Regents whenever the <u>combined rate</u> of dropped credits across the UW System exceeds five percent in any academic year, beginning in the fall of 1990, and make recommendations for further action by the Board of Regents on UW System add/drop policies."

In addition, at the September 1988 Hearing, S13.10, of the Legislature's Joint Committee on Finance, the committee passed a motion which directed the UW System to report annually to the committee beginning April 1, 1990, on campuses where undergraduate drop rates exceed five percent and on the steps being taken to achieve a five percent drop rate at those institutions. The reporting date was changed to August 1 by the Joint Committee on Finance on September 13, 1990.

The primary difference in the reporting requirements to the UW Board of Regents and to the Legislative Joint Finance Committee is that UW System Administration is required to report to the Board of Regents whenever the Systemwide rate of dropped credits exceeds five percent, and to report annually to the Legislative Joint Committee on Finance on campuses where undergraduate drop rates exceed five percent.

REQUESTED ACTION

Acceptance of the Report on 1996-97 Undergraduate Drop Rates for submission to the Joint Committee on Finance.

DISCUSSION

The Joint Committee on Finance directed the UW System to report annually to the committee on campuses where undergraduate drop rates exceed five percent. Drop rates among UW institutions ranged from 1.6 percent to 9.2 percent in Spring 1995-96, and 1.4 percent to 8.3 percent in Fall 1996-97.

Two institutions exceeded the five percent threshold in Spring 1995-96; UW Stout at 5.2 percent and UW Colleges at 9.2 percent. For Fall 1995-96, UW-Stout exceeded five percent, but fell below the threshold for Fall 1996-97. UW-Stout will continue to monitor the situation and consider adjustments to drop policies if necessary. In Fall 1996-97, UW Colleges exceeded the threshold with a drop rate of 8.3 percent.

The increase in UW Colleges drop rate can be attributed to the installation of a new student information system which allows access to more accurate data. This led to a change in the methodology used to calculate completed credits. UW Colleges will examine why the rates are above five percent and design activities to improve retention.

UW System continues to meet the intent of Resolution 5045 by reducing the number of Systemwide dropped credits to below the five percent threshold. The fall term Systemwide drop rate has fallen from 5.5 percent in Fall 1988 to 3.6 percent in Fall 1996, continuing a general pattern of decline of this rate. The spring term drop rates have fallen from 5.1 percent in Spring 1989 to 4.0 percent in Spring 1996. On an annual basis, the drop rate has fallen from 5.3 percent in 1988-89 to 3.8 percent in 1995-96.

RELATED REGENTS POLICIES

Resolution 5045 (October 1988); Resolution 6153 (July 1992).

The University of Wisconsin System

Office of the President 1720 Van Hise Hall, 1220 Linden Drive Madison, Wisconsin 53706 (608) 262-2321 FAX (608) 262-3985

November 12, 1997

TO:

Senator Brian Burke, Co-Chair

Representative John Gard, Co-Chair

Joint Committee on Pinance

FROM:

Katharine C. Lyall Whyall

RE:

Industrial and Economic Development Report

S. 36.25(25) (c) of the Wisconsin Statutes requires the University of Wisconsin System to report biennially to the Joint Committee on Finance regarding the use, duration, cost, and potential economic benefits of projects funded by Industrial and Economic Development Funds. The attached report was approved by the University of Wisconsin System Board of Regents at its November 7, 1997 meeting and is hereby forwarded to the Joint Committee.

If you need any additional information regarding the research and public service report, please contact Associate Vice President Sharon James (263-3680).

cc: David J. Ward, Senior Vice President
Marcia Bromberg, Vice President
Kathleen Sell, Associate Vice President
Sharon L. James, Associate Vice President
Joan Westgard, Director of Budget and Planning
Michael Heifetz, Department of Administration
Merry Larsen, Legislative Fiscal Bureau

Industrial and Economic Development Research Fund 1995 - 97 Biennial Report

This program has been developed to enhance the relationship between research at UW System institutions and Wisconsin industry practices in an effort to promote growth in the state's economy.

The following report is broken into three sections. The Center for Dairy Profitability is an on-going UW-Extension and UW-Madison project that addresses continuing needs of the Wisconsin economy. The UW-Madison University-Industry Relations (UIR) administers that campus' Industrial and Economic Development Research Program. The Applied Research Program projects are administered by the UW System Office of Academic Affairs.

For the latter two programs, grants are awarded on a competitive basis. Proposals are encouraged that are technically innovative, of interest to a broad economic sector, and have high potential to benefit Wisconsin's industrial and economic development in the near term.

Summaries of the accomplishments of the Industrial and Economic Development Fund projects follow in the next sections of this report. These projects served a large number of Wisconsin businesses and industries in various fields. In the long run, many of these funded projects are expected to improve the competitive position of Wisconsin firms.

A. Center for Dairy Profitability (UW-Extension/UW-Madison)

Dairy is the primary source of agricultural income in Wisconsin, representing more than two-thirds of the state's farm income. Dairy's total impact on Wisconsin's economy has been estimated to be nearly \$16 billion annually. Given dairy's importance, it follows that the state would be willing to invest in institutions and programs that would enhance the economic vitality of dairy in Wisconsin. One such investment is the University of Wisconsin Center for Dairy Profitability (CDP).

Because management decisions are key to dairy's long-run economic success, the CDP stresses educational programs that enhance the management skills and decision-making abilities of dairy producers and others who assist farmers in management decisions. The CDP develops, coordinates, and delivers interdisciplinary educational programs and emphasizes integrated production, financing, and marketing management systems to foster improved dairy profitability. To provide aid in this ever-changing and increasingly competitive industry, the Center's over-riding goal is to improve the competitiveness of Wisconsin's dairy industry by focusing on issues concerned with Wisconsin's market share and by assessing opportunities for expansion and growth.

Programs and accomplishments of the CDP include:

MANAGEMENT EDUCATION PROGRAMS

Agribusiness Executive Management Program

This program is the product of a partnership among UW-Extension, the UW Madison School of Business, and the College of Agriculture and Life Sciences of the UW-Madison. The purpose of this program is to

help producers, processors, and agribusiness professionals improve management skills and address the many issues facing today's agriculture.

While the program was initially set to begin in January of 1997, low enrollments caused the kick-off to be re-scheduled for December of 1997, with nearly 30 people signed up thus far. The four learning modules to be included are managing capital and financial resources, human resource management, structure and organization of agricultural markets, and management. AEMP is a fee based program that has a cost of \$500 per module.

AgVentures

Through this program, agricultural producers gain knowledge of management concepts and learn how to apply their knowledge to problems they face in their own farm operations.

Producers who participate in this program will take modules that address various topics, each consisting of 15 hours of instruction. The instruction is spread across three, five-hour days over a span of three weeks. Five topics are addressed by AgVentures: strategic planning, financial management, human resource management, management information systems, and business arrangements and operating agreements. The program is coordinated by county extension agents and much of the instruction is also done by the agents.

In 1996-97, county extension agents delivered several pilot modules of AgVentures: strategic planning, financial management, and human resource management. More offerings are planned for the 1997-98 programming year. The program is run on a fee basis in the range of \$50 to \$100 per module.

Dairy Farm Business Summary

For more than five years, county extension agents in western Wisconsin have been working with over 100 farmers, helping them to evaluate the financial performance of their dairy farm businesses. These participants in the Dairy Farm Business Summary (DFBS) have allowed their financial records to be included in an aggregate data base used to compute performance standards for the program participants.

Four State Dairy Program

The CDP is an active participant in the Four State Dairy Extension Program which is a joint programming effort with dairy specialists in Iowa, Minnesota, and Illinois. Participation in this partnership is advantageous as it gives the CDP access to educational experts and resources that it would otherwise be unable to obtain. The group annually develops and delivers programs that address management problems of producers in the upper-midwest. They hold four conferences each year.

Dairy Health and Management Certificate Program

This two-year certificate program focuses on providing Wisconsin veterinarians with additional tools and techniques to enhance the services they provide to dairy clientele. Several members of CDP staff are heavily involved in teaching key sections of the program. Gary Frank's method of computing milk production costs is one of the key elements in one of the modules. In addition, Frank's work on farm records data is used extensively in teaching the participating veterinarians key concepts in farm financial management.

Midwest Dairy Management Conference

CDP staff members helped organize the first Midwest Dairy Management Conference held in August of 1996 in Minneapolis. Center faculty and staff were involved in program and implementation committees and were conference speakers. The CDP is involved in planning for the next conference scheduled for August of 1998.

Midwest Banking Institute

CDP staff serve as instructors for the annual Midwest Banking Institute held on the UW-Madison campus each summer. Agricultural loan officers and agricultural extension agents from five states attend this annual program. Staff of the CDP are responsible for the dairy farm case study covered over three days of this one week program that annually attracts 50 to 100 participants.

ECONOMIC PERFORMANCE OF DAIRY FARMS

Farm Financial Management Project

CDP staff are working with the Lakeshore and Fox Valley farm management associations on a project where farm level records are used to analyze the costs, returns, and financial performance of approximately 900 dairy farms in northeast Wisconsin. This work began in 1994 and is expected to continue.

This data set has been used to conduct cost of production studies for the dairy industry and other analyses that were intended to discover how financial performance varies depending on herd size, rolling herd average, debt level, etc. The findings of these analyses were summarized in a publication titled "Dairy Profit Navigator," that appeared as an insert in the Wisconsin Agriculturalist. The database is now being employed to analyze dairy farm financial performance over multiple years.

Grazing Survey

For three years, the CDP has been involved in a project intended to shed some light on the costs and returns of Wisconsin producers who have adopted various grazing practices on their dairy farms. Financial data is being collected from approximately 30 farm families who have volunteered to be a part of this study. A preliminary first year report has been issued and the second year report is in progress. The plan is to continue this project to monitor the financial performance of grazing operations over time.

Cooperation with AgSource Dairy Herd Improvement

There is considerable interest in the combining of production and financial information to learn more about the impact of production management practices on profitability. The upper midwest is also in need of benchmarks for comparison. The CDP is now in the process of merging its financial data base with a comprehensive production database maintained by AgSource Dairy Herd Improvement (DHI). This project ties in with work being done in other areas of the country and with the national project currently being worked on by NDHIA.

MANAGEMENT INFORMATION SYSTEMS FOR DAIRY PRODUCERS

Agricultural Accounting and Information Management System (AAIMS)

The AAIMS is a computerized agricultural accounting system maintained by members of the CDP. The program now has both DOS and Windows versions. Since its latest release in January of 1997, over 300 copies have been sold.

Agricultural Budget Calculation Software

Agricultural Budget Calculation Software (ABCS) is used in evaluating the economics of various croprelated problems. This budget generator is used to estimate the cost of producing various crops under various systems.

Decision Aids

CDP staff have developed a variety of computerized spreadsheets that may be used in making various management decisions. Enterprise budgets are available for dairy, replacement dairy stock, swine, and beef, and there are other spreadsheets that can be used in determining the value of silage, corn, and other feeds.

Interactive Farm Records Database

The Wisconsin Milk Marketing Board (WMMB) awarded the CDP a grant to develop an interactive database that could be accessed via the Internet on the WMMB homepage.

WWW Homepage

The CDP has had a homepage since 1995. It contains a wealth of information of value to dairy producers and professionals. The following is a brief description of some of the information available at the CDP web-site.

CDP Online Resources lists software and CD-ROMs available through the Center. Also included is a section on available papers, publications, and videos.

University of Wisconsin and Extension Internet Sites has links to departments and libraries at UW-Madison as well as other UW System institutions. Also included are several useful UWEX and USDA links.

Agricultural and Dairy Related Internet Sites contains links to a large collection of web-sites. In addition, it links to various datasets, two of which are the 1992 Census of Agriculture and the USDA Economics and Statistics System.

POLICY WORK

The director of the CDP serves on the Wisconsin Farm Land Advisory Council and chairs the sub-committee that is establishing the procedures for computing use-value assessments for Wisconsin farm land. CDP staff has compiled data needed for estimating use-value and assisted in the development of

procedures and methods for computing use-values across Wisconsin municipalities. Members of CDP staff will continue to be involved in the implementation of this new method of taxing farm land.

OTHER PROGRAMMING ACTIVITIES

Dairy Farm Family of the Year

The Dairy Farm Family of the Year recognition completed its fifth year. Six regional winners were selected and an overall winner was named at a statewide banquet.

Kraft continues to support this program which is open to any dairy family in Wisconsin. This past year the first scholarships were awarded from the Dairy Farm Family of the Year Scholarship Fund. Approximately 15 young men and women received awards to enroll in dairy management courses taught by institutions within the Wisconsin Technical College System or the UW System.

Dairy Profit Report Newsletter

The Dairy Profit Report (DPR) newsletter is published ten times annually and routinely distributed to over 400 people. It is self-supporting and serves as an outlet to keep people apprised of activities and current areas of work of the CDP and others working in dairy extension throughout the University of Wisconsin System.

B. Industrial and Economic Development Research Funds

The office of University-Industry Relations (UIR) has responsibility for administering the I&EDR research funding program for the University of Wisconsin-Madison. During the 1995-96 competition, the UIR evaluated 31 research proposals requesting a total of \$3,944,813 over a three year period. Of these applications, seven research proposals were approved, totaling \$173,708 for 1995-96 funding.

There was no formal call-for-proposals during the 1996-97 fiscal year. Funding commitments for this fiscal year from the two previous proposal cycles left a balance that was too low to justify administering a call for proposals. Instead, proposals received for the Grants-to-Faculty program for industrial and economic development were considered for funding under I&EDR. Eight research proposals were approved totaling \$120,247 for 1996-97 funding. The various projects and their goals are as follows:

1995-96

1. Transparent, Impermeable Barrier Films for Polymer Packaging Materials. One of the biggest challenges at this time facing Curwood, Inc. of Oshkosh, Wisconsin and other manufacturers of polymeric (plastic) packaging materials is the need to develop flexible polymeric materials with significantly reduced permeability to oxygen, water vapor, flavorants, etc. While there are a number of well-known techniques currently used in the industry to acquire low-permeability polymer substrates, none are considered complete or optimal solutions. The overriding current need is to develop a substrate that combines the high permeation resistance of metals with the optical clarity and reliable adhesion of the polymer coatings. We propose to support Curwood's competitive market position through the research and development of a new Al-Al₂O₃ two-layer technology involving a pure 5-10 nm Al film deposited directly on the polymer substrate and topped by a second thin layer of Al₂O₃.

- Method to Improve Phosphorus Bioavailability. Feed grade phosphates are known to contain trace elements (i.e. aluminum and iron) that interfere with phosphorus absorption, and can increase fecal phosphorus. A small Wisconsin company (B&B Specialties, Spencer, WI) has developed a method to remove contaminating elements which interfere with phosphorus absorption. Involved in this process is the use of raw materials mined by another WI based company (Great Lakes Calcium, Green Bay, WI). Preliminary field data suggests that 25-50% less of the premium monocalcium phosphate is needed to achieve performance using typical commercial grade phosphates. Thus the objective of this trial is to confirm if premium grade monocalcium phosphate is more biologically available to animals. The potential gross market of such a product exceeds \$100 million per year.
- 3. Enhanced Performance of Photodiode Devices through Plasma Processing. Conventional solid state Si photodetectors generally have a poor responsivity to UV light. By applying a coating of plasma polymerized methyl methacrylate (PPMMA), the shorter wavelength UV light can be shifted toward the longer wavelength visible region where the Si photodiode has a better response. In a preliminary study, PPMMA coatings have increased the overall photocurrent of photodiodes manufactured by Silicon Sensors, Inc. (Dodgeville, Wisconsin). However, the success rate was less than satisfactory for a commercial process. The research objectives are to maximize photocurrent enhancement of Si photodiodes and to study the photoluminescence (PL) property of plasma polymer films. A statistically designed experiment will be used to investigate the effect of different plasma process parameter levels on the photocurrent and PL responses.
- 4. Measuring the Dynamic Slip Boundary Condition for Molten Plastics. The dynamics of wall slip in extrusion will be addressed, a central issue in plastics processing. A new theory of dynamic wall slip by Graham (1994) will be used to interpret large amplitude oscillatory shear measurements made in the slip regime. From measured chaotic stress responses, the first measurements of characteristic relaxation time for dynamic slip will be made. Principles of nonlinear dynamics including process identification techniques will be developed for this purpose. The dynamic slip boundary condition will be used to design a commercial die for a Wisconsin company, Extrusion Dies, Inc. (Chippewa Falls).
- 5. Physiology, Cultivation, and DNA Fingerprinting Techniques in Species Identification for Goldenseal (Hydrastis canadensis L.) and Ginseng (Panax quinquefolium). This research is designed to aid Wisconsin's \$75 million ginseng industry which is currently facing stiff competition from Canada and subsequent falling product prices. The first objective is to examine the potential of intercropping or rotational cropping goldenseal with ginseng. The value of goldenseal on the world market rivals that of ginseng and thus seems to be an ideal choice for succession cropping, particularly because it is not susceptible to the same diseases as ginseng and is an overall easier more vigorous plant to produce. The second objective is to use DNA fingerprinting to determine distinguishing molecular markets (RAPDs) for American and Asian ginseng to try to put a stop to the illegal mixing of the two species which is costing Wisconsin growers millions of dollars each year.
- 6. Cost Effective Membrane Bioreactors for Chlorinated Aliphatic Hvdrocarbon Removals. Of Wisconsin's 40 sites on the EPA's National Priority List (NPL), approximately 80% involve chlorinated alipaphatic hydrocarbon (CAH) contamination. Existing technologies for remediating CAH-contaminated groundwaters require a continuous supply of costly granular activated carbon (GAC). Since achieving clean-up objectives often requires decades, supplying GAC is a large part of the total remediation cost. Biological treatment of CAHs could be significantly less costly than using GAC; however, several significant problems exist. The goal of the proposed research is to demonstrate that the problems above can be overcome in a bioreactor in which methanotrophic biofilms are grown on gas-permeable silicone tubing. Since methane and oxygen diffuse through silicone without forming bubbles, 100% transfer

efficiencies can be achieved. Also, since CAH concentrations will be high and methane concentrations low at outer regions of the biofilms, methane inhibition of MMO-mediated CAH oxidation will be minimal. Conversely, since CAH concentrations will be low and methane concentrations high at inner regions of the biofilms, optimal bacterial growth conditions will exist. Finally, since dead bacteria resulting from toxic CAH metabolites will only occur at the outer regions of the biofilms, they can be easily scoured off the biofilms and removed from the reactor.

7. Passive Measurements of Isotopesto Monitor Health. Currently, no simple method exists for assessing the metabolic state and history of free-ranging, wild animals, domestic animals, or humans. The purpose of this project is to establish our stable isotope process model as the method of choice in applications for the identification and diagnosis of nutritional problems in animals and humans. It is applicable to early diagnosis of kidney and liver problems and cancers, as well as early infection in postoperative or trauma situations in humans. The process can detect infections that develop in domestic livestock reared in enclosures. It can detect exposure to low level toxicants that affect basic metabolic processes. It is the method of choice for monitoring wild animal populations. With this technique, a single, one time sample will provide a nutritional history of the subject over the previous several months.

1996-97

- 1. <u>Piglets Which Show Extremely High Cholesterol</u>. This project produced piglets which showed extremely high cholesterol. These piglets were transmitted to industry for their determination of how company-proprietary drugs can attenuate the development of arterioschlerosis.
- 2. <u>Creating Business and Research Opportunities for Wisconsin Companies with France/Europe and Quebec through the Internet</u>. Developed a web page promoting joint Wisconsin and French-speaking country interactions. This web page will be a forum through which questions can be posed, hires can be obtained, products sold, and partnerships sought. Users in both countries will be universities, governmental agencies, and industry.
- 3. A Field Emission Triode-Dynode Amplifier for Threshold Current Signals. The objective of this study was to investigate the feasibility of constructing a device capable of measuring light intensity in the 650 to 1060 nm (red to infrared) range with both photon counting threshold sensitivity and photomultiplier-like time response. The investigators are seeking to combine the high quantum efficiency of a solid state detector with the speed and low noise of a dynode chain electron multiplier by means of a low noise field emission triode structure. Such a device would find application both in improving research instruments used in many fields of pure and applied research where fast, sensitive red to infrared light detection is required. In particular, a Madison-based small business, Sterling Scientific, Inc., has expressed interest in developing the proposed device for its commercial potential if feasible.
- 4. <u>Use of the Umbilical Cord in Fetal Gene Therapy</u>. The umbilical cord forms a vascular network between the mother and fetus, making it a very attractive system for delivery of therapeutic factors to developmentally-compromised fetuses. The investigators created allantois (pre-umbilical cord) cells that have been genetically-engineered to express blood-borne therapeutic factors. Then, using microsurgical techniques developed by the investigators, chimeric umbilical cords were constructed to deliver the expressed therapeutic factor to the developmentally-compromised fetus. The significance of this rests on the fact that, at present, the only methods available for introducing the fetus to therapeutic factors are the mother's circulation or intermittent injection into the umbilical cord. However, some substances cannot cross the placental barrier, and injection of substances into the umbilical cord is impractical when the half-life of the factor is extremely short.

- 5. The Role of Bovine Placental GnRH and GAP Peptides on Secretion of Placental Hormone in Early Gestation. This study examined the role of GnRH and GAP peptides on bovine placental hormone secretion. This project will be the first in "neuropeptide" regulation of bovine placental hormone secretion and as such constituted an entirely new area of ruminant reproductive biology. The information acquired may be applied to invent/improve a number of reproductive technologies already in wide use as well as to form the basis for new diagnostic tests.
- 6. <u>Real-time Satellite Information</u>. This project received matching money to obtain funding from NSF for the development of a consortium entitled, "Partnership & Innovation in Commercial Applications of Satellite Remote Sensing and Related Geospatial Technologies." If successful, this consortium could provide assistance to Wisconsin companies and state agencies who require real-time satellite information.
- 7. <u>In-vitro Fertilization with Sexed Sperm</u>. The researchers developed the capacity to alter the sex ratio of cattle by sexing sperm via flow cytometry techniques and used this sperm in an in-vitro fertilization system. As a result, greater control can be placed on the calf output of the some two million Wisconsin cows.
- 8. <u>Lithium-containing Polysiloxanes as Solid Electrolytes for Rechargeable Lithium Batteries</u>. Lightweight, rechargeable batteries will be essential if electric automobiles are ever to become practical for transportation. Lithium batteries offer the best possibility for providing the required high energy density and low mass. An electrolyte which will transport lithium ions is necessary to separate the anode and cathode. For reasons of safety, a solid electrolyte is desired; the presently available materials are not fully satisfactory. Development of a superior solid electrolyte could lead to favorable economic results in Wisconsin, home of the leading battery manufacturer, Ray-o-Vac.

C. Applied Research Program

Applied Research Program projects are funded through a competitive process administered by the UW System Office of Academic Affairs. All proposals were first evaluated by an institutional review panel before being submitted to UW System Administration.

For 1995-96, a total of 32 proposals requesting approximately \$1.3 million were submitted for review to the UW System and for 1996-97, a total of 33 proposals requesting approximately \$1.65 million were submitted. Each proposal was then reviewed and rated by a UW System review panel comprised of five representatives of UW System institutions, a representative from the Wisconsin Department of Development, and a staff member from the UW System Office of Academic Affairs.

In addition to the quality of the research design and likelihood of successful completion, a major criterion for selection was the potential impact of the project on Wisconsin's economy.

1995-96

1. Integrated Pest Management for the Balsam Twig Aphid and Balsam Gall Midge in Wisconsin Christmas Tree Plantations. This project tested the development of monitoring systems for balsam twig aphid and balsam gall midge populations, the determination of population levels at which application of insecticides is economically necessary, and the impact of integrating silvicultural techniques in the management of Christmas trees to conserve natural enemy populations. Project results suggest that growers' continued reliance on pesticide use will have negative economic impact in the long run.

- 2. <u>Control of Cryptosporidiosis in Wisconsin Dairy Calves</u>. The objective of this study was to reduce morbidity, mortality, and economic loss due to infection by *Cryptosporidium parvis*. The study investigated the use of experimental vaccines and found that vaccination of adult cows does reduce infection in calves. It was also found that these calves released fewer *C. parvis* spores into the environment, reducing presence of this organism in the environment.
- 3. <u>Development of a Prototype Mountain Bike Rim of a Novel Design</u>. This study investigated how the use of alloys and manufacturing technology could improve the performance of bicycle rims. Prototypes produced in the course of this project did offer significant improvement in stiffness, strength, wearability and fracture resistance. Trek Bicycle Company, which cosponsored this project, has adopted the use of the new alloys and production techniques.
- 4. <u>Using Near-Infrared Reflectance Spectroscopy to Screen Alfalfa Germplasm for Resistance to Fungal Pathogens</u>. Near-infrared reflectance spectroscopy (NIRS) has been utilized as a tool for characterizing complex organic substances. This study investigated the use of NIRS to identify patterns of resistance to infection in alfalfa. Results indicate that NIRS can identify resistance, and that application of these findings can accelerate the development of new cultivars by the alfalfa industry.
- 5. Cloning Xenorhabdus Insecticidal Protein Toxin. Following the successful engineering of the insecticidal bacterial toxin Cry genes from Bacillus thuringiensis (Bt) into plants, many crops will soon be planted as insect resistant transgenic varieties (e.g. corn, potatoes, cotton). The central problems with this strategy are that a) Bt genes show a limited spectrum of toxicity, b) few new genes are currently being discovered and c) with a large range of planting, resistance seems inevitable. The central aim of this project is to provide a new toxin gene from Photorhabdus, with a different mode of action and toxicity spectrum, to replace or be used in conjunction with Bt toxins. This toxin will also provide a safe alternative to the declining number of conventional insecticides marketed in the United States. The potential market for this toxin gene is approximately \$100-200 million per year.
- 6. <u>Human Supernumerary Chromosome to be Used for Gene Transfer</u>. The goal of this project is to isolate and re-engineer a tiny supernumerary human chromosome containing non-essential DNA, so that this mini-chromosome could be used as a vector for gene therapy. This research, if successful, will aid in the patentability of the mini-chromosome which could be used as a vector for stable and efficacious integration of specific genes of interest in therapeutic applications. This research would provide a significant economic benefit to diverse segments of Wisconsin's human health care industry.
- 7. A New Class of Antiproliferative Agents. Polyamines are ubiquitous cell components essential for normal growth. Compounds interfering with polyamine biosynthesis have considerable potential for use as therapeutic agents. They may also be useful chemopreventative and antineoplastic agents. Polyamine analogs have potent antiproliferative activity and are promising agents for the treatment of cancer. This project will provide the synthetic back-up for this polyamine research for the design and preparation of new polyamine analogs of therapeutic value. The proposed work could lead to the production of compounds that could be licensed by Wisconsin's emerging biotechnology and pharmaceutical industry.
- 8. <u>Computational/Experimental Modeling of Composite Casting</u>. The objective of this project was to develop a versatile computer code for use by industry in the modeling of castings. Predictions made by the code developed in this project conformed very well to standard benchmark models. Findings of this research have been incorporated into courses offered through the Center for Continuing Education and will be made available to industries in Wisconsin.

- 9. An Energy-Efficient Control Technique to Significantly Improve Indoor Air Quality in Wisconsin Houses. The objective of this research was to field test the effectiveness of an innovative mechanical ventilation system as an energy-efficient control technique to improve indoor air quality (IAQ) by reducing the concentration levels of air pollutants (e.g. NO_x, CO, RSP, VOC's, radon, etc.). A mechanical ventilation system with an air-to-air heat exchanger which recovers waste heat from furnace flue gas and exhausted contaminated indoor air offered an energy-efficient alternative in alleviating the general deterioration of IAQ in many homes that were designed or retrofitted to achieve low air infiltration.
- 10. <u>Direct Microbial Conversion of Corn and Paper Mill Sludge to Ethanol and By-Product Animal Feed.</u> Corn is used as a raw material in the production of ethanol. This project proposed the use of paper mill sludge as a partial replacement for corn to reduce the cost of ethanol production. Results show that paper mill sludge can replace 1/4 to 1/3 the volume of corn. This study also identified optimal fermentation temperatures, pH and times and demonstrated the cost-effectiveness of bypassing the use of enzymes. The by-product resulting from this process is suitable for use as a cattle feed.
- 11. <u>Screening for Multiple Disease Resistance in Potato Germplasm</u>. Three potato cultivars were studied to determine the presence of multiple resistance to disease and pests. Results of the study did allow for the identification of patterns of multiple resistance in the clones. On-going study will determine the feasibility of cross-breeding these clones with standard cultivars. The long term goal of this research is to produce cultivars with high levels of disease resistance.
- 12. <u>Project Clearwater</u>. The goal of this project was to test the hypothesis that various surface water algae and other surface products of excessive water fertility are an effective plant and crop nutrient. The research focused on investigations of filamentous algae applications. The project demonstrated the feasibility of using the algae to produce a mat for enhancing the germination and rooting of grass seed in the planting of new lawn.
- 13. <u>Integration of Assistive Technology, Operational Management and Human Factors Engineering into the Operation of Assisted Living Facilities.</u> This project developed a basic quality function deployment model to be used by the assisted living industry. Incorporating this model will result in increased operational efficiencies and assurance of quality services for individuals residing in Class C Assisted living facilities. Results of this study have been made available to the assisted living industry in Wisconsin.

1996-97

- 1. Making Potato Microtuber Bioreactor Technology Commercially Feasible. The goal of this project was to determine whether the quality of microtubers can be improved through the use of a naturally-occurring inhibitor of the enzyme invertase. Results indicate that the enzyme does have the desired effect. The potential economic impact of a commercially-useable microtuber production is still valid. The microtuber technology explored in this project continues to be the most advanced and promising of any such technology currently existing and is the subject of on-going research.
- 2. <u>Development of an Assay to Detect Tuberculosis for Wisconsin's Agriculture Industry</u>. Bovine tuberculosis is a deadly disease with significant economic impact on Wisconsin's livestock industry. Current testing takes six to eight weeks for results. Tests developed under this project include a sample preparation protocol, controls to limit false readings, and produces results in two days. The tests will also differentiate strains, reducing the time and costs of contact tracing. Incorporation of this assay will enhance Wisconsin's reputation for livestock of exceptional health and quality.

- 3. <u>Use of a Natural Phospholipid to Promote Uniform Ripening (color development) and to Prolong Shelf Life of Wisconsin Cranberries</u>. This project investigated the effect of pre-harvested natural lipid on ripening and shelf-life of cranberry fruits intended for fresh and juice markets. Results indicated that shelf-life of harvested fruit is increased by the application of the lipid in a post-harvest dip. Application of these results are expected to increase profitability through the reduction of losses due to fruit rot.
- 4. New Techniques for Machine Vision Inspection of Printed Circuit Boards. The objective of this project was to develop new algorithms and techniques for using machine vision for the inspection of solder joints. The project produced several new two-dimensional algorithms for solder joint inspection as well as techniques for improved reliability of the algorithms. The application of these findings will improve Wisconsin's competitive position in the global machine inspection market.
- 5. <u>Innovative Devices for Household Appliances</u>. The development of energy efficient housing technology has shown that the domestic gas range is a major pollution source for indoor air. Research conducted under this grant investigated the use of a sealed-container porous matrix burner for natural gas. Results indicate that the use of such burners decrease pollution of indoor air but reduce fuel efficiency. The commercial application of this research is on hold until the cost of electricity is much higher than that of natural gas.
- 6. <u>Development of Manufacturing Technology for Bricks and Blocks in Wisconsin Utilizing Recycled Materials</u>. The State of Wisconsin currently generates approximately 1.2 million tons of coal ash and 800,000 tons of used foundry sand per year, most of which is landfilled. This project developed technology for the use of ash and foundry sand in the production of concrete blocks, bricks and paving stones. Application of this recycling technology will reduce production costs of concrete blocks, brick and paving stones and significantly reduce the costs and ecological impact of by-product disposal.
- 7. Performance Study of an Innovative Burner System for Paper Mills. The main work of this project was to evaluate the effectiveness of the proposed porous media burner as a heating system for paper production companies. The results of this research indicate that the use of porous media burners can reduce the cost of paper drying when compared to technologies currently in use.
- 8. A New Microbial Product with Diverse Applications for Wisconsin Industries. The bacterium Microcystis flos-aquae produces a substance called "capsule," which is used as an industrial texturizer, thickener, gelling agent and binder. The research conducted under this project defined the conditions that cause capsule suspension to thicken or gel. This research indicates that capsule is an attractive alternative to several thickening and gelling agents that are currently used, particularly in enzyme preparations that require metal activation.
- 9. <u>Assessing the Effectiveness of a PCR Assav to Monitor Populations of Phytoplasma-Infected Leafhoppers in Potato Fields</u>. The results of this project suggest that PCR assay can be developed as a quicker, more reliable technique to monitor phytoplasma in leafhoppers than the current technologies. In particular, the findings show that the practice of pooling leafhopper samples may be unwise. The development of this assay technique is the subject of on-going research.
- 10. <u>Manufacturing Process Improvement Through Supercomputer Simulation</u>. The goal of this project was to optimize the use of a supercomputer in modeling the injection molding process. Results obtained from this research show that a supercomputer provides processing speed 20 to 40 times faster than a leading edge workstation. The supercomputer provided complete and accurate product analysis, ready to

be tooled with 24 iterations in three hours. A high speed workstation would require about 40 hours to complete four iterations. These findings have been shared with many Wisconsin companies.

Appendix A

New Industrial and Economic Development Research Awards
for 1995-96

Principal Investigator Title	<u>Department</u>	<u>Period</u> (years)	1995-96 Budget	<u>Total</u> <u>Budget</u>
J. H. Booske Transparent, Impermeable Barrier Films for	Eng Res Ctr Plasma-Aided Manufacturing	3	\$30,059	\$85,370
Polymer Packaging Materials	_			
M. Cook	Animal Sciences	2	\$6,709	\$14,575
Method to Improve Phosphorus Bioavailability				
D. Denton	Eng Res Ctr Plasma-Aided	3	\$32,041	\$93,301
Enhanced Performance of Photodiode Devices through Plasma Processing	Manufacturing	м		
A. J. Giacomin	Mechanical	3	\$25,193	\$123,398
Measuring the Dynamic Slip Boundary Condition for Molten Plastics	Engineering			
H. Harrison	Horticulture	2	\$28,366	\$50,214
Physiology, Cultivation, and DNA Fingerprinting Techniques in Species Identification for Goldenseal (Hydrastis canadensis L.) and Ginseng (Panax quinquefolium)				
J. K. Park	Civil &	2	\$31,340	\$58,586
Cost Effective Membrane Bioreactors for Chlorinated Aliphatic Hydrocarbon Removals	Environmental Engineering			
W. Porter	Zoology	2	\$20,000	\$33,198
Passive Measurements of Isotopesto Monitor Health				

Appendix B

New Industrial and Economic Development Research Awards
for 1996-97

Principal Investigator Title	<u>Department</u>	Period (years)	1996-97 Budget	<u>Total</u> <u>Budget</u>
A. Attie	Biochemistry	1	\$14,040	\$14,040
Piglets Which Show Extremely High Cholesterol				
G. Bousquet	French & Italian	1	\$12,953	\$12,953
Creating Business and Research Opportunities for Wisconsin Companies with France/Europe and Quebec through the Internet	italiali			
D. DenHartog	Physics	2	\$10,270	\$16,158
A Field Emission Triode-Dynode Amplifier for Threshold Current Signals				-
K. Downs	Anatomy	1	\$14,998	\$14,998
Use of the Umbilical Cord in Fetal Gene Therapy				
T. Duello	Obstetrics &	2	\$21,970	\$54,416
The Role of Bovine Placental GnRH and GAP Peptides on Secretion of Placental Hormone in Early Gestation	Gynecology			
T. Lillesand	Environmental	1	\$19,632	\$19,632
Real-time Satellite Information	Remote Sensing Ctr.			
J. Rutledge	Meat &	1	\$23,384	\$23,384
In-vitro Fertilization with Sexed Sperm	Animal Sci.			
R. West	Chemistry	3	\$3,000	\$66,794
Lithium-containing Polysiloxanes as Solid Electrolytes for Rechargeable Lithium Batteries				

Appendix C

Applied Research Program Research Awards
1995-96

Principal Investigator	Campus	Award	<u>Title</u>
P. Kleintjes	UW-Eau Claire	\$34,743	Integrated Pest Management for the Balsam Twig Aphid and Balsam Gall Midge in Wisconsin Christmas Tree Plantations.
S. McGuirk, P. Lunn	UW-Madison	\$42,071	Control of Cryptosporidiosis in Wisconsin Dairy Calves.
F. Worzala	UW-Madison	\$35,230	Development of a Prototype Mountain Bike Rim of a Novel Design.
C. R. Grau	UW-Madison	\$37,643	Using Near-Infrared Reflectance Spectroscopy to Screen Alfalfa Germplasm for Resistance to Fungal Pathogens.
R. ffrench-Constant	UW-Madison	\$24,165	Cloning Xenorhabdus Insecticidal Protein Toxin
L. Meisner	UW-Madison	\$40,147	Human Supernumerary Chromosone to be Used for Gene Transfer
L. Marton	UW-Madison	\$20,703	A New Class of Antiproliferative Agents
S. Garimella	UW-Milwaukee	\$39,000	Computational/Experimental Modeling of Composite Casting.
K. Renken	UW-Milwaukee	\$12,966	An Energy-Efficient Control Technique to Significantly Improve Indoor Air Quality
C. McDermott	UW-Oshkosh	\$29,952	Direct Microbial Conversion of Corn and Paper Mill Sludge to Ethanol and By- Product Animal Feed.
S. H. Jansky	UW-Stevens Point	\$30,705	Screening for Multiple Disease Resistance in Potato Germplasm
C. E. Yost	UW-Stout	\$35,635	Project Clearwater.
P. Schwartz, S. Kumar	UW-Stout	\$41,583	Integration of Assistive Technology, Operational Management and Human Factors Engineering into the Operation of Assisted Living Facilities.

Appendix D

Applied Research Program Research Awards 1996-97

Principal Investigator	<u>Campus</u>	<u>Award</u>	<u>Title</u>
B. H. McCown	UW-Madison	\$42,318	Making Potato Microtuber Bioreactor Technology Commercially Feasible.
G. A. Splitter	UW-Madison	\$50,000	Development of an Assay to Detect Tuberculosis for Wisconsin's Agriculture Industry.
J. P. Palta	UW-Madison	\$29,066	Use of a Natural Phospholipid to Promote Uniform Ripening (color development) and to Prolong Shelf Life of Wisconsin Cranberries.
J. Zhang	UW-Milwaukee	\$49,633	New Techniques for Machine Vision Inspection of Printed Circuit Boards.
S. H. Chan	UW-Milwaukee	\$49,817	Innovative Devices for Household Appliances.
T. R. Naik	UW-Milwaukee	\$47,590	Development of Manufacturing Technology for Bricks and Blocks in Wisconsin Utilizing Recycled Materials.
R. S. Amano	UW-Milwaukee	\$49,995	Performance Study of an Innovative Burner System for Paper Mills.
D. L. Parker	UW-Oshkosh	\$43,666	A New Microbial Product with Diverse Applications for Wisconsin Industries.
K. Mogen	UW-River Falls	\$16,642	Assessing the Effectiveness of a PCR Assay to Monitor Populations of Phytoplasma-Infected Leafhoppers in Potato Fields.
J. Amoapim	UW-Stout	\$47,975	Manufacturing Process Improvement Through Supercomputer Simulation.

Note: As part of the 1996-97 UW System budget reduction reported to the Joint Committee on Finance, the Industrial and Economic Development Fund was reduced. Awards totaling \$426,702 were awarded prior to this 1996-97 budget reduction. The awarded amounts were held harmless and the difference from budget was funded from other sources.